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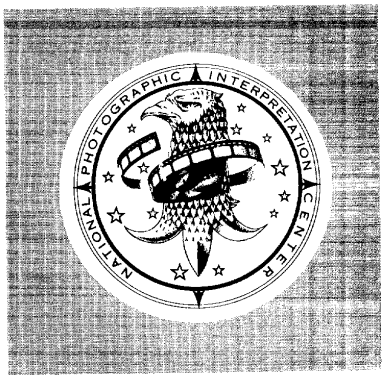

NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

BASIC IMAGERY
INTERPRETATION
REPORT

MOSCOW EXPLOSIVES PROPELLANTS RESEARCH AND DEVELOPMENT FACILITY LYUBERTSY

[redacted] 25X1

STRATEGIC WEAPONS INDUSTRIAL FACILITIES

USSR

[redacted] 25X1

DECLASS REVIEW by
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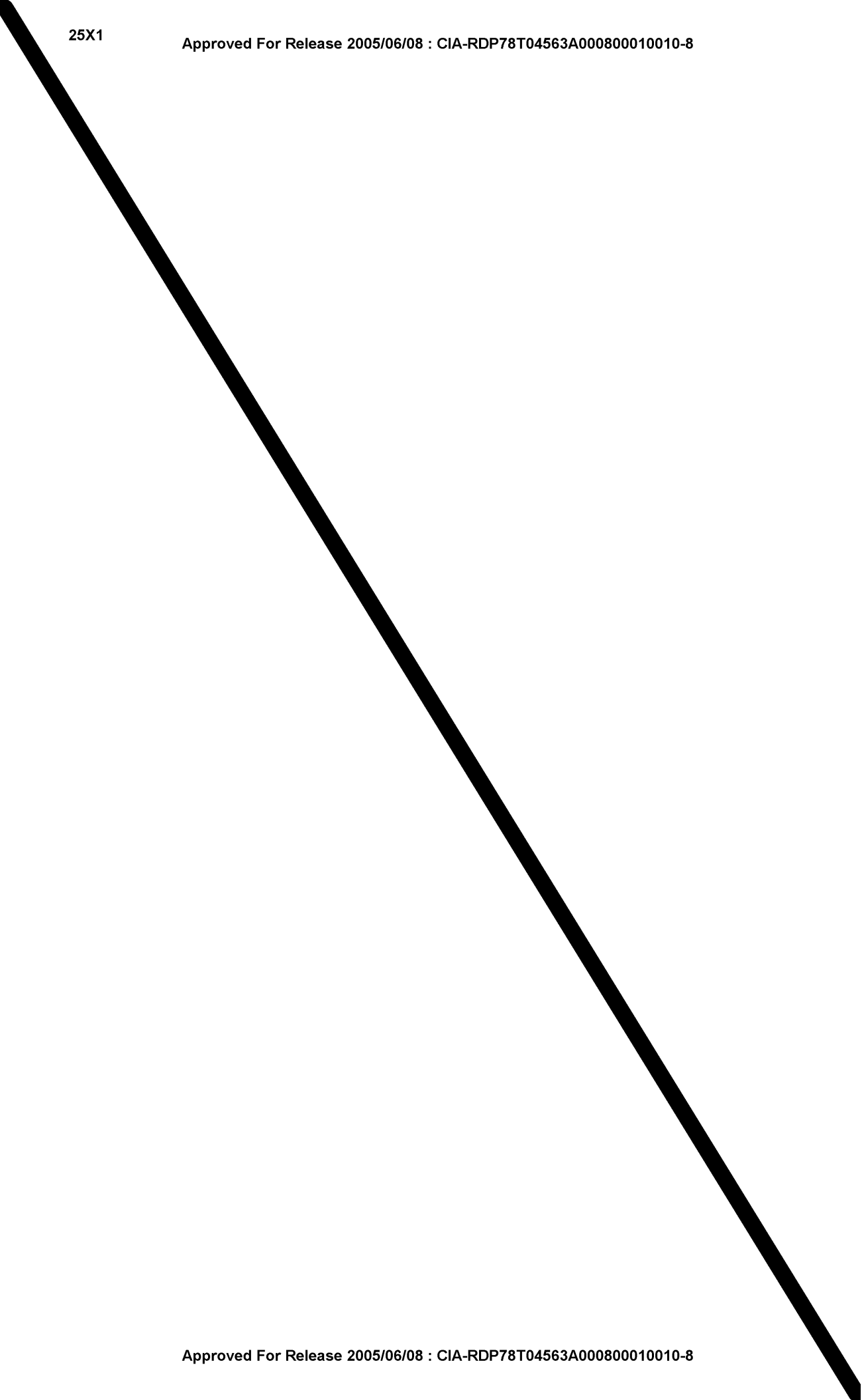

INSTALLATION OR ACTIVITY NAME				COUNTRY
Moscow Explosives Propellants Research and Development Facility Lyubertsy				UR
UTM COORDINATES	GEOGRAPHIC COORDINATES		BE NUMBER	COMIREX NO.	NIETB NO.
NA	55-37-30N 037-50-30E			None	
MAP REFERENCE					
US Air Target Chart, Series 200, Sheet 0167-5, scale 1:200,000 (SECRET)					
LATEST IMAGERY USED		NEGATION DATE (If required)			
		NA			

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ABSTRACT

1. Moscow Explosives Propellants Research and Development Facility Lyubertsy consists of two major areas: an engineering and laboratory area and a possible double-base production area. The latter area has the capability to produce and test very small rocket motors. The plant covers 60 acres and contains 45 major structures, 25X1

25X1

2. The major research effort at Moscow Explosives Propellants R&D Facility Lyubertsy is probably in the rocket motor field. This contention is substantiated by the completion in 1964 of structures which possibly house double-base rocket motor production operations and by the proximity and close functional relationship between the subject facility and Moscow Solid Motor Production Plant Lyubertsy (Moscow Solid Propellant R & D Facility Lyubertsy). 25X1

3. Moscow Explosives Propellants R&D Facility Lyubertsy may be the home of Scientific Research Institute 125, which has been reported by to be in the Lyubertsy area. 25X1

4. This report is based on photography from It contains a photograph, a line drawing, and textual description and discussion of the facility. 25X1

INTRODUCTION

5. Moscow Explosives Propellants Research and Development Facility Lyubertsy is situated on uneven terrain near the east bank of the Moscow River, 11 nautical miles (nm) southeast of the center of Moscow (Figure 1).

6. Photographic evidence suggests that a design bureau involved in solid propellant and possibly explosives research and development is located here. Scientific Research Institute 125, probably engaged in propellant and explosives R&D, has been reported in the Lyubertsy area.[1]

7. Moscow Explosives Propellants R&D Facility Lyubertsy is the only known facility in the Moscow area with an apparent capability of producing nitroglycerine. It is very likely that the facility supplies nitroglycerine to Moscow Solid Propellant R&D Facility Lyubertsy,[2,3] which is 2 nm to the southeast.

8. Moscow Solid Propellant R&D Facility is engaged in development and prototype production of rocket motors. However, there are no buildings in this plant devoted to engineering research. This suggests that Moscow Explosives Propellants R&D Facility Lyubertsy, with an abundance of engineering space, provides the engineering R&D work required by the Solid Propellant R&D facility. Although physically separate, the two facilities may be completely integrated.

9. The Moscow area has the largest concentration of aerospace facilities in the USSR. The Lyubertsy facility could be related to a number of these installations, including Krasnoarmeysk Solid Motor Development Facility (25X1

BASIC DESCRIPTION

10. Moscow Explosives Propellants R&D Facility Lyubertsy covers approximately 60 acres and consists of 45 major structures, providing 52,246.3 square meters (562,170 square feet) of floorspace (Figures 2 and 3 and Table 1). The facility can be divided into two main areas: an engineering and laboratory area and a possible double-base propellant production and test area.

Engineering and Laboratory Area

11. The functional distribution of floorspace of the engineering and laboratory area and a photographic comparison with the Central Design Bureau for Space and Intercontinental Rockets, Moscow Missile and Space Development Center Kaliningrad 88 25X1 ([redacted]) suggest a design and development role for the facility. Table 2 shows the floorspace distribution for structures in the area.

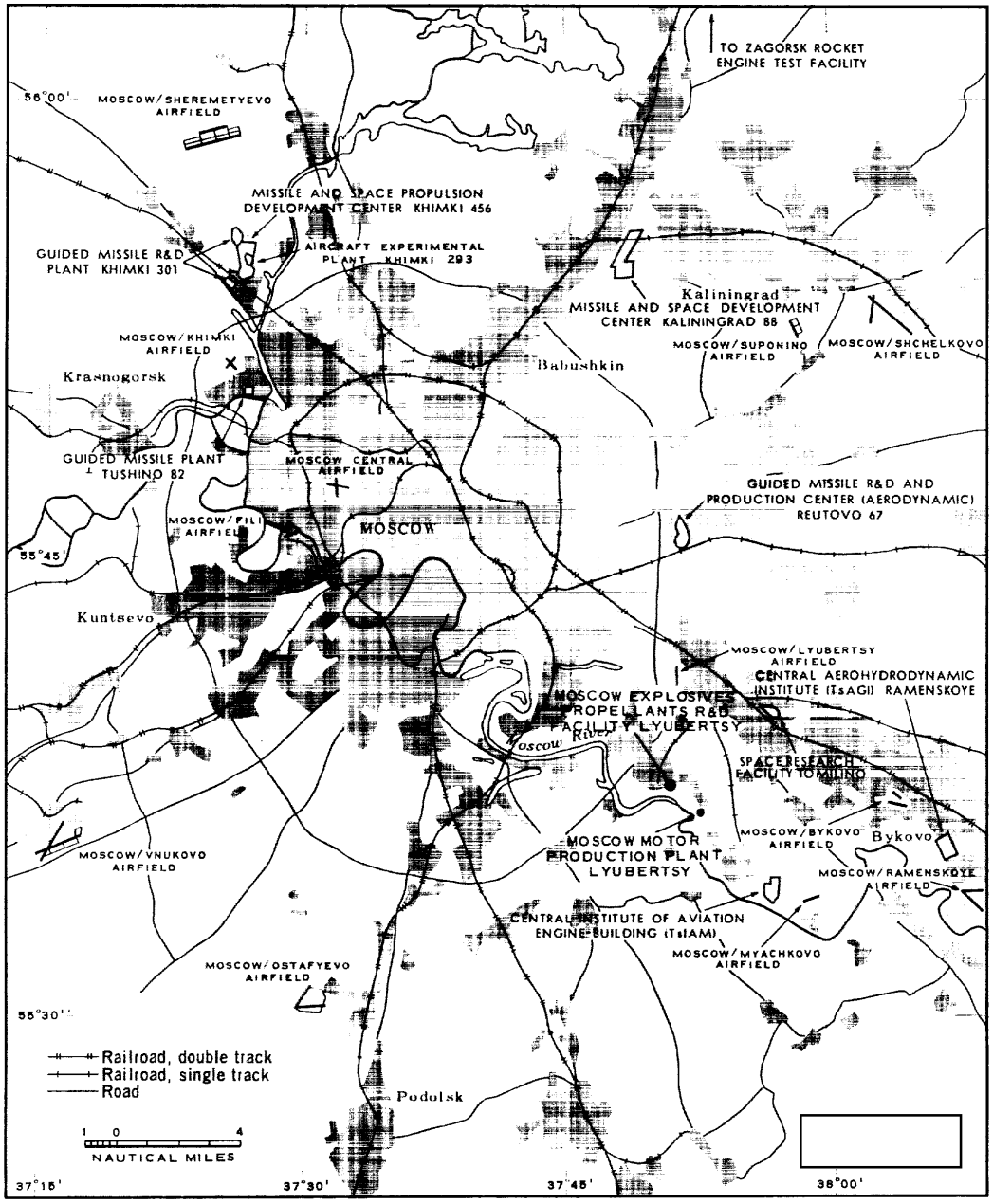

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FIGURE 1. LOCATION OF MOSCOW EXPLOSIVES PROPELLANTS RESEARCH AND DEVELOPMENT FACILITY LYUBERTSY, USSR

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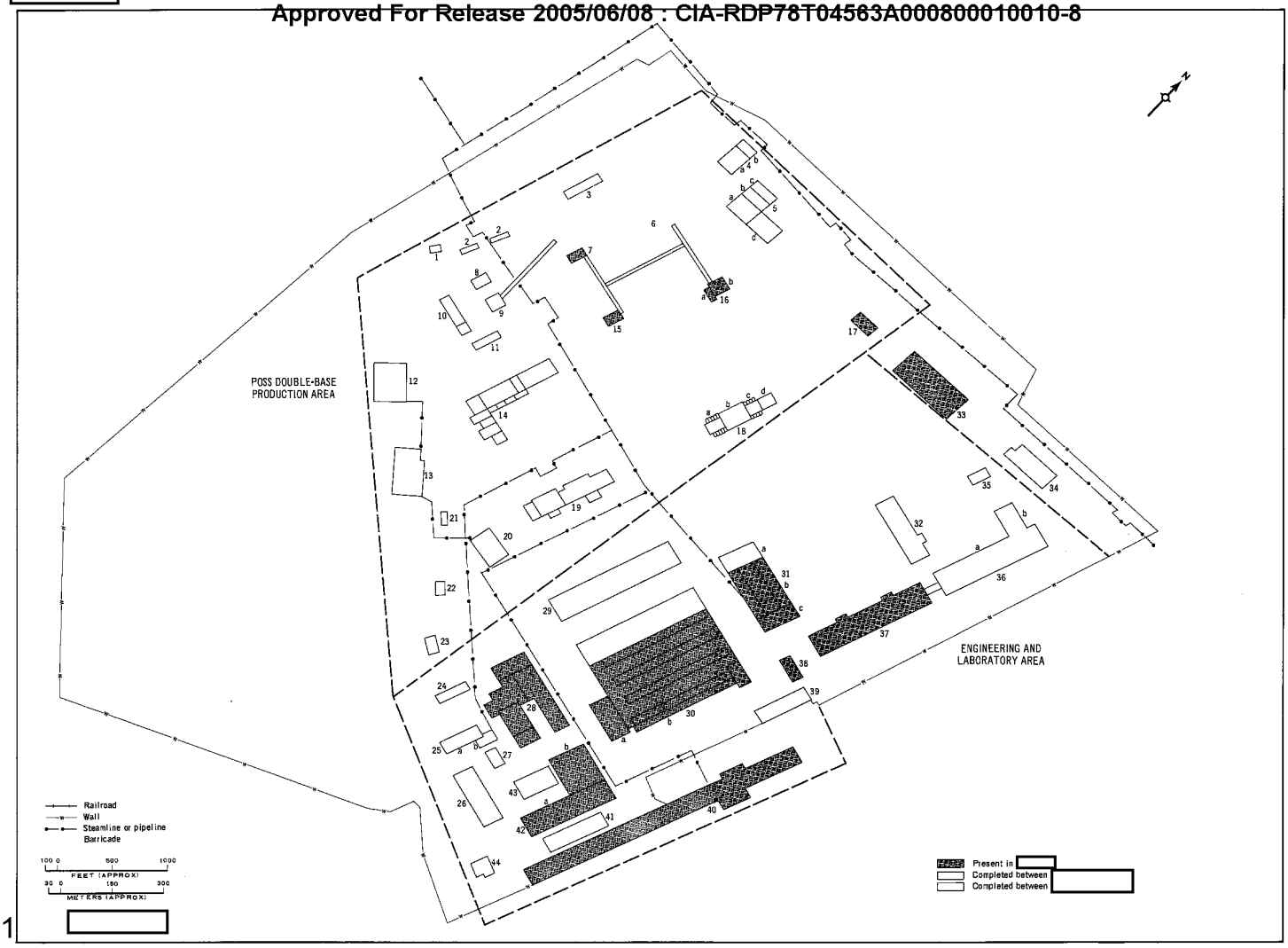

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FIGURE 3. LAYOUT OF MOSCOW EXPLOSIVES PROPELLANTS RESEARCH AND DEVELOPMENT FACILITY LYUBERTSY

Table 1. Data on Buildings and Structures at Moscow Explosives Propellants Research and Development Facility Lyubertsy

Item	Description or Probable Function	Dimensions (meters) Length	Width	Height	Floorspace Square Meters)	(Square Feet)	Date Complete	Comments
1	Storage							
2	Storage (2)							
3	Storage							
4	Ingredients preparation							
a								
b								
5	Ingredients preparation & storage							
a								
b								
c								
d								
6	Barricade							Bldg inside barricade on [redacted] first observed missing in [redacted] still missing on [redacted] photography.
7	Processing							
8	Magazine							
9	Magazine							
10	Poss double-base mixing							
11	Poss shipping							
12	Poss finishing							
13	Finishing							South half of bldg complete [redacted]
14	Poss rolling & extrusion							
a								
b								
15	Processing							
16	Nitration							
a								
b								
17	Processing							
18	Laboratory test							
a								Five test bays on each side of this section.
b								
c								Four test bays on each side of this section.
d								
19	Inert operations							
20	Support							
21	Utility							
22	Utility							
23	Utility							
24	Utility							
25a	Utility							
b								
26	Storage							
27	Utility							
28	Foundry							Bldg was renovated by [redacted]
29	Engineering							
30	Shop/assembly							Whole bldg has been progressively renovated since [redacted]
a								
b								Estimated three-story bldg.
31								
a	Engineering							
b	Shop							Three-story section.
c	Engineering							
32	Support							
33	Warehouse							
34	Warehouse							
35	Support							
36	Engineering Laboratory							
a								Four-story section. Four-story walkway connects this building with item 35.
b								Two-story section.
37	Engineering Laboratory							Four-story bldg.
38	Admin							
39	Admin							Two-story bldg.
40	Engineering Laboratory							
41	Storage							
42	Shop							Possibly for pattern or model making.
a								
b								
43	Storage							
44	Support							

*Approximate measurement.

Table 2. Engineering and Laboratory Area Floorspace Distribution

Function	Square Meters	Square Feet
Administration	[redacted]	
Engineering		
Shop and metal working		
Shop assembly		
Other (storage, support, utility)		
Total		

25X1

12. Two-thirds of the floorspace of this area is devoted to engineering. The area contains four large multistory engineering/laboratory buildings, the largest of which appeared to be externally complete in [redacted] One large shop/assembly building (item 30), supported by a probable foundry (item 28), is probably used to produce scale-model hardware associated with the research and testing programs. 25X1

Possible Double-Base Production Area

25X1

13. The possible double-base production area is identified on the basis of a comparison with an area of Perm Munitions and Chemical Combine K Kirov 98 [redacted] The identification is weakened by the lack of nitrocellulose production in the plant. However, nitrocellulose is easily transportable and is brought in from outside sources in at least one other double-base plant (Petrokrepost Explosive and Solid Motor Plant Morozov, [redacted]

25X1

25X1

14. Based on the relationship and locations of the buildings in this area, it is possible to hypothesize that double-base rocket motors might be produced in the following manner. Raw materials for nitroglycerine production, such as nitric acid, sulfuric acid, and glycerin, are supplied from other plants and stored and prepared for use in the ingredients preparation buildings (items 4 and 5). After the nitration process (items 7, 15, and 16), nitroglycerine is mixed with nitrocellulose in the possible double-base mixing building (item 10).

15. Double-base propellant then moves to the possible rolling and extrusion building (item 14), where it is extruded into grain of the proper size. Final processing of the grain and the assembling of motors is accomplished in the finishing building (item 13).

16. The collocation of engineering space and at least 18 small test bays indicates that item 18 serves as a laboratory test building. Motors of the very small size believed to be produced at this facility could be tested in this building. A motor too large to be tested in the laboratory test building could be tested at the nearby Moscow Solid Motor Production Plant Lyubertsy, which has three test cells.

Chronology

17. This facility has approximately doubled in floorspace since it was first observed in [redacted] The completion of the new engineering building (item 29) by [redacted] represents an increase of over 40 percent in the available engineering floorspace. The completion between 1964 and 1968 of buildings believed to be associated with double-base propellant and rocket motor production and the close association with the solid motor production plant suggest that the major effort at the facility is in the rocket motor field. Estimated dates of completion for each building are given in Table 1.

25X1

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Essential Services and Security

18. A single rail spur enters the facility in the northeastern section and serves four buildings along the northern wall of the plant. Heat and power are supplied from Moscow Heat and Power Plant, Lyubertsy TETS-22 [redacted] A security wall completely circumscribes the facility.

25X1

REFERENCES 25X1

[redacted]

MAPS OR CHARTS

USATC. Series 200, Sheet 0167-5, scale 1:200,000 (SECRET)

DOCUMENTS

25X1 1. NSA, [redacted] *"Identification of Scientific Research Institute #125, Lyubertsy, As a Possible Munitions/Propellants Research Facility* (TOP SECRET CODEWORD--[redacted] only) 25X1

25X1 2. NPIC. RCA-09/0025/69, [redacted] *Moscow Solid Propellant R&D Facility Lyubertsy,* Feb 69 (TOP
25X1 SECRET [redacted]

25X1 3. NPIC. RCA-09/0001/71, [redacted] *Moscow Solid Motor Production Plant,* Lyubertsy, Aug 70 (TOP
25X1 SECRET [redacted]

25X1 4. NPIC. RCA-09/0026/70, [redacted] *Moscow Missile and Space Development Center Kaliningrad 88,*
25X1 Apr 70 (TOP SECRET [redacted]

REQUIREMENT

COMIREX BR-J/02
NPIC/IEG/MSD/DMB Project 221339

25X1 "Latest [redacted] photography as of [redacted]